nucleotide located about two to four nucleotides 5' of the 3' nucleotide of the detector primer which is complementary to the target sequence;

b) amplifying the target by hybridization and extension of the detector primer;

c) determining an efficiency of detector primer extension is greater, lesser or equal to the efficiency of extension of a detector primer without said diagnostic nucleotide; and

d) detecting the presence or absence of the single nucleotide polymorphism based on the efficiency of detector primer extension.

REMARKS

Claims 1 and 3-22 are in the present application.

In order to further clarify the present invention and advance prosecution, Applicants have amended Claim 1. Applicants shall address the rejections under 35 USC §103(a) below.

I. Obviousness - 35 U.S.C. § 103 (a)

A. Claims 1-5, 7-12, 14-18, and 21 were rejected under 35 U.S.C. § 103(a) as allegedly rendered unpatentable by Newton et al (U.S. Patent No. 5,595,890) in view of Reynolds et al (U.S. Patent 5,763,184) and Krausa et al. (Human Immunology, 44:35-42, 1995). It was alleged that Newton et al. disclose all aspects of the rejected claims except that Newton et al. do not teach the diagnostic nucleotide is about one to four nucleotides from a 3' terminal nucleotide. It was alleged that diagnostic nucleotides adjacent to the 3' end were well known in the art at the time the invention was made as taught by Reynolds et al and Krausa et al. It was further alleged that "while Reynolds et al. do not teach an embodiment wherein the primer is complementary to a polymorphic site near the primer's 3' end, Krausa et al. teach a similar method wherein the diagnostic primer comprises a diagnostic nucleotide about one to four nucleotides 5' of the 3' terminal nucleotide." Thus, it was alleged that "one skilled in the art would have been motivated by the teaching of Krausa et al. to modify the primers of Newton et al. as suggested by Reynolds et al. to derive diagnostic primers having a diagnostic nucleotides one to four nucleotides 5' of the 3' end."